UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,891	08/10/2001	Jim Feeley	59184/P002US/10026564	4788

29053 7590 04/28/2006

DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P.
2200 ROSS AVENUE
SUITE 2800
DALLAS, TX 75201-2784

EXAMINER	
ENSEY, BRIAN	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,891	FEELEY ET AL.	
	Examiner	Art Unit	
	Brian Ensey	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,30-40,45-52 and 54-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21,30-40,45-52 and 54-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-4, 6-15, 18, 19, 21, 30-39, 45-47, 49, 51, 52 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toht U.S. Patent No. 2,930,856 in view of Reiter U.S. Patent No. 5,606,621.

Regarding claim 1, Toht discloses an earpiece auditory device comprising: a behind-the-ear (BTE) component (1), the BTE component being shaped to fit in an ear of a user, wherein said BTE component comprises a module including processing circuitry; a receiver component (2) component being shaped to fit into the ear cavity of the user; and a connector (2) physically coupling said BTE component to said receiver component, said connector having at least one end detachably physically coupled to said BTE component or said receiver component, and said connector being sufficiently rigid (6) so as to allow said connector to be used to insert and remove the receiver component from the ear cavity of the user (See Toht Figs. 1 and 2 and col. 1, lines 50-64). Toht does not expressly disclose said receiver component is a completely in the canal (CIC) and said connector is designed to include a portion of said connector within the ear canal of the user. However, Reiter teaches a BTE (10) and CIC (18) hearing aid with the CIC component comprising a receiver (20) inserted deeply in the ear canal of the user and connected to the BTE component with a flexible cable (22) with a portion of said cable connected within the ear canal of the user (See Reiter Fig. 1 and col. 2, lines 11-23). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to use the CIC component of Reiter in place of the ear mold of Toht to reduce or eliminate feedback an allow gain to be increased without disturbing the user with the occlusion effect (See Reiter abstract).

Regarding claim 2, the combination of Toht in view of Reiter further discloses said completely-in-canal component further comprises a speaker (20) (See Reiter Fig. 1 and col. 2, lines 15-20).

Regarding claim 3, the combination of Toht in view of Reiter further discloses said physically coupling includes communicatively coupling said behind-the-ear component to said completely-in-canal component, and wherein at least one of the at least one detachable physical coupling includes a detachable communicative coupling (See Toht col. 1, lines 49-52).

Regarding claim 4, the combination of Toht in view of Reiter further discloses further discloses and ear mold coupled to the CIC component, wherein the ear mold seals the ear canal when said CIC component is inserted into the canal of the user (See Reiter col. 2, lines 15-18).

Regarding claim 6, the combination of Toht in view of Reiter further discloses said connector comprises: at least one wire cable (2); and at least one fastener (plug and socket) physically, as well as communicatively, coupled to said BTE component or said CIC component; wherein at least one of said at least one fastener provides at least one of the at least one detachable physical coupling (See Toht col. 1, lines 61-63).

Regarding claim 7, the combination of Toht in view of Reiter further discloses at least one of said at least one fastener is operable to prohibit an undesirable external element from interfering with a detachable communicative coupling between said connector and said behind-the-ear component (See Toht col. 1, lines 61-63).

Regarding claim 8, the combination of Toht in view of Reiter further discloses at least one of said at least one fastener is operable to prohibit an undesirable external element from interfering with a detachable communicative coupling between said connector and said completely-in-canal component (See Toht col. 1, lines 61-63).

Regarding claim 9, the combination of Toht in view of Reiter further discloses a hole and prong arrangement for quick and easy assembly and disassembly (See Toht col. 1, lines 61-63).

Regarding claim 10, the combination of Toht in view of Reiter further discloses a speaker module is detachably physically coupled to said ear mold (See Toht col. 1, lines 51-53).

Regarding claim 11, the combination of Toht in view of Reiter further discloses said CIC component further includes a speaker receiving member, and wherein said connector includes a speaker fastener detachably physically coupled to said speaker receiving member (See Toht col. 1, lines 50-53).

Regarding claim 12, the combination of Toht in view of Reiter further discloses said speaker is detachably physically coupled to said speaker fastener (See Toht col. 1, lines 50-53).

Regarding claim 13, the combination of Toht in view of Reiter further discloses the detachable physical coupling between said speaker and speaker fastener includes a detachable communicative coupling (See Toht col. 1, lines 50-53).

Regarding claim 14, the combination of Toht in view of Reiter further discloses said at least one fastener includes a fastener detachably physically coupled to said module of said behind-the-ear component (See Toht col. 1, lines 50-64).

Regarding claim 15, the combination of Toht in view of Reiter further discloses the detachable physical coupling between said fastener and said module includes a detachable communicative coupling (See Toht col. 1, lines 50-64).

Regarding claims 18 and 19, the combination of Toht in view of Reiter further discloses processing circuitry includes sound processing circuitry wherein said sound processing circuitry includes sound amplification circuitry (See Toht col. 1, lines 38-49).

Regarding claim 21, the combination of Toht in view of Reiter further discloses said behind-the-ear component further includes a microphone (See Toht col. 1, lines 38-49).

Regarding claim 30, the combination of Toht in view of Reiter further discloses at least one of the at least one detachable physical coupling includes at least one projection of said connector engaging at least one groove of said BTE or CIC component (See Toht col. 1, lines 56-63).

Regarding claim 31, Toht discloses an earpiece auditory device comprising: an BTE component (1), the BTE component being shaped to fit in an ear of a user, wherein said BTE component comprises a module including processing circuitry; a receiver component (2), the receiver component being shaped to fit into the ear cavity of the user, said receiver component further comprising an ear mold (2); and a means (2) for physically coupling said BTE component to said receiver component, wherein said means for physically coupling includes means for detachably physically coupling said BTE component to said receiver component, and said means for physically coupling being sufficiently rigid (6) so as to allow said means for physically coupling to be used to insert and remove the receiver component from the ear cavity of the user (See Toht Figs. 1 and 2 and col. 1, lines 50-64). Toht does not expressly disclose said receiver

component is a completely in the canal (CIC) and said means for physically coupling is designed to include a portion of said connector within the ear canal of the user. However, Reiter teaches a BTE (10) and CIC (18) hearing aid with the CIC component comprising a receiver (20) inserted deeply in the ear canal of the user and connected to the BTE component with a flexible cable (22) with a portion of said cable connected within the ear canal of the user (See Reiter Fig. 1 and col. 2, lines 11-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the CIC component of Reiter in place of the ear mold of Toht to reduce or eliminate feedback an allow gain to be increased without disturbing the user with the occlusion effect (See Reiter abstract).

Regarding claim 32, the combination of Toht in view of Reiter further discloses said completely-in-canal component further comprises a speaker (20) (See Reiter Fig. 1 and col. 2, lines 15-20).

Regarding claim 33, the combination of Toht in view of Reiter further discloses said means for physically coupling includes means for communicatively coupling said behind-the-ear component to said completely-in-canal component, and wherein said means for detachably physically coupling includes means for detachably communicatively coupling said completely-in-canal component to said behind-the-ear component (See Toht col. 1, lines 49-52).

Regarding claim 34, the combination of Toht in view of Reiter further discloses said means for detachably physically coupling includes means for detachably physically coupling at said behind-the-ear component (See Toht Figs. 1 and 2 and col. 1, line 38 to col. 2, line 28).

Regarding claim 35, the combination of Toht in view of Reiter further discloses said means for detachably physically coupling also includes means for detachably physically coupling at said completely-in-canal component (See Toht col. 1, lines 49-52).

Regarding claim 36, the combination of Toht in view of Reiter discloses a speaker receiving member and wherein said means for physically coupling includes a speaker fastening means (See Toht col. 1, lines 49-52).

Regarding claim 37, the combination of Toht in view of Reiter discloses e said means for detachably physically coupling includes means for detachably physically coupling said speaker to said speaker fastening means (See Toht col. 1, lines 49-52).

Regarding claim 38, the combination of Toht in view of Reiter discloses e said means for detachably physically coupling includes means for detachably physically coupling said speaker fastening means to said speaker receiving member (See Toht col. 1, lines 49-52).

Regarding claim 39, the combination of Toht in view of Reiter further discloses processing circuitry includes sound processing circuitry (See Toht col. 1, lines 38-49).

Regarding claim 45, Toht discloses a method for providing a plurality of earpiece auditory device components, a portion of which may be assembled to form an earpiece auditory device tailored to a user, said method comprising: providing a plurality of BTE components from which a BTE component operable to facilitate the user's intended use for the earpiece auditory device may be selected, wherein each of said BTE components comprises a module including processing circuitry; and providing a plurality of connectors of sufficient length to physically couple a selected BTE component when said selected BTE is placed in the ear of the user to a receiver component when said receiver component is placed inside the ear cavity of the user and

wherein said connector of sufficient length includes at least one end operable to detachably physically couple to said selected BTE component or said receiver component, and wherein said receiver component comprises a speaker, and said connector of sufficient length is sufficiently rigid so as to allow said connector of sufficient length to be used to insert and remove the receiver component from the ear canal of the user (See Toht Figs. 1 and 2 and col. 1, lines 50-64). Toht does not expressly disclose said receiver component is a completely in the canal (CIC) and said connector of sufficient length is designed to include a portion of said connector within the ear canal of the user. However, Reiter teaches a BTE (10) and CIC (18) hearing aid with the CIC component comprising a receiver (20) inserted deeply in the ear canal of the user and connected to the BTE component with a flexible cable (22) with a portion of said cable connected within the ear canal of the user (See Reiter Fig. 1 and col. 2, lines 11-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the CIC component of Reiter in place of the ear mold of Toht to reduce or eliminate feedback an allow gain to be increased without disturbing the user with the occlusion effect (See Reiter abstract).

Regarding claim 46, the combination of Toht in view of Reiter further discloses a connector of sufficient length is operable to communicatively couple said selected behind-the-ear component to said completely-in-canal component, and wherein at least one of the at least one end of said connector of sufficient length operable to detachably physically couple to said selected behind-the-ear component or said completely-in-canal component is also operable to detachably communicatively couple to said selected behind-the-ear component or said completely-in-canal component (See Toht Figs. 1 and col. 1, lines 49-63).

Regarding claim 47, the combination of Toht in view of Reiter further discloses said plurality of said behind-the-ear components includes a behind-the-ear component fitting behind the ear of the particular user in such a manner as to be made invisible by the user's ear (See Toht col. 2, lines 3-12).

Regarding claim 49, the combination of Toht in view of Reiter further discloses said plurality of said BTE components includes at least one BTE component having sound processing circuitry (See Toht Fig. 1 and col. 1, lines 38-49).

Regarding claim 51, the combination of Toht in view of Reiter further discloses at least one BTE component having sound processing circuitry includes at least two BTE components having different sound processing circuitry (Toht teaches both transistors and an amplifier) (See Toht Fig. 1 and col. 1, lines 38-49).

Regarding claim 52, the combination of Toht in view of Reiter further discloses said behind-the-ear components further includes at least one BTE component having a microphone (See Toht Fig. 1 and col. 1, lines 38-49).

Regarding claim 60, the combination of Toht in view of Reiter further discloses said connector of sufficient length includes at least one wire cable and at least one fastener operable to facilitate a detachable physical coupling (See Toht Fig. 1 and col. 1, line 38 to col. 2, line 28).

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toht in view of Reiter as applied to claim 1 above, and further in view of Hidekazu Japanese Patent No. 2151100.

Regarding claim 5, the combination of Toht in view of Reiter discloses a device as claimed. The combination of Toht in view of Reiter does not expressly disclose the ear mold of

the CIC component is vented such that the ear canal is not sealed when said CIC component is inserted into the ear canal of the user. However, the use of vented ear molds is well known in the art and Hidekazu teaches a BTE hearing device with a vented ear mold component (See Fig. 1 and translation abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the vented ear mold of Hidekazu for the ear mold of the combination of Toht in view of Reiter for ventilation (See Hidekazu abstract).

3. Claims 16, 17 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toht in view of Reiter as applied to claims 1 and 45 above, and further in view of Pulvinage et al. U.S. Patent no. 5,987,146.

Regarding claims 16 and 17, the combination of Toht in view of Reiter discloses a hearing device as claimed. The combination of Toht in view of Reiter does not expressly disclose the ear mold is a universal fit ear mold and said CIC component is an open mold configuration. However, the use of universal ear molds in open ear configurations is well known in the art and Pulvinage teaches a universal fit ear mold in an open mold configuration (See Figs. 4 and 5 and col. 5, lines 31-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ear mold of Pulvinage in the combination of Toht in view of Reiter for an ear mold that would fit a large number of users and reduce wax buildup and moisture problems (See Pulvinage col. 3, lines 31-35).

Regarding claims 54-57, the combination of Toht in view of Reiter discloses a hearing device as claimed. The combination of Toht in view of Reiter does not expressly disclose a plurality of ear molds with differing dimensions including a universal fit ear mold. However, the use of universal ear molds in open ear configurations is well known in the art and Pulvinage

teaches a variety of ear molds with differing dimensions including a universal fit ear mold is an open mold configuration (See Figs. 4 and 5 and col. 5, lines 31-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ear molds of Pulvinage in the combination of Toht in view of Reiter for an ear mold that would fit a large number of users and reduce wax buildup and moisture problems (See Pulvinage col. 3, lines 31-35).

4. Claims 20, 40 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toht in view of Reiter as applied to claims 1, 31 and 45 above, and further in view of Taenzer et al. U.S Patent No. 6,445,799.

Regarding claims 20, 40 and 50, the combination of Toht in view of Reiter discloses a hearing device as claimed with signal processing circuitry. The combination of Toht in view of Reiter does not expressly disclose sound processing circuitry includes sound reduction circuitry. However, the use of sound reduction circuitry is well known in the hearing aid field and Taenzer teaches sound reduction circuitry (See Figs. 1 and 2 and col. 4, lines 19-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the sound reduction circuitry of Taenzer in the combination of Toht in view of Reiter for improved quality signals for the user.

5. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toht in view of Reiter as applied to claim 45 above, and further in view of Rapps U.S Patent No. 6,101,259.

Regarding claim 48, the combination of Toht in view of Reiter does not expressly disclose said plurality of said BTE components includes at least two behind-the-ear components of different dimensions. However, the combination of Toht in view of Reiter does not limit the

BTE construction and multi-dimensional BTE housings are well known in the art and Rapps teaches a BTE component of various dimensions (See Fig. 2 and col. 1, lines 45-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a BTE devices with different dimensions to select the device which most comfortably fit a wide variety of users (See abstract).

6. Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toht in view of Reiter in view of Pulvinage as applied to claim 45 above, and further in view of Kang et al. U.S Patent No. 5,757,935

Regarding claims 58 and 59, the combination of Toht in view of Reiter in view of Pulvinage does not expressly disclose said plurality of at least one element includes a plurality of speakers wherein said plurality of speakers includes at least two speakers having different performance characteristics. However, Kang teaches a hearing device for the hearing impaired comprising two speaker with different performance characteristics (See Fig. 2 and abstract, air conduction and bone conduction speakers each inherently having its own performance characteristic). It would have been obvious to one of ordinary skill in the art at the time of the invention to use multiple speakers of Kang in the combination of Toht in view of Reiter in view of Pulvinage with different performance characteristics to provide a broad range of audio signals to the users (See Kang col. 1, lines 48-62).

Response to Arguments

7. Applicant's arguments with respect to claims 1-21, 30-40, 45-52 and 54-60 have been considered but are moot in view of the new ground(s) of rejection.

With regards to the applicant's argument on page 11 of the Remarks submitted 02/27/06 that *while Toht describes possibly employing a stiffner with the connector to allow the connector to retain its shape. Toht does not describe that the connector is sufficiently rigid so as to allow said connector to be used to insert and remove the CIC component from the ear of the user,* the Examiner disagrees.

Toht teaches a connector element (3) comprising a flexible tubular shell (4) including a flexible stiffener (6) preferably formed of wire such as stainless steel or other suitable material. Toht also teaches the stiffening element (6) is not only flexible but substantially form retaining in character (See col. 1, line 56 to col. 2, line 9). It is the opinion of the examiner that the stiffener as taught by Toht is sufficiently rigid to allow insertion and removal of a CIC device when incorporated in the combination hearing device as taught by Toht in view of Reiter.

Conclusion

8. The Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group **Art Unit 2615**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Va. 22313-1450

Or faxed to:

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SINH TRAN
SUPERVISORY PATENT EXAMINER

BKE
April 21, 2006